

OIIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/925,778

DATE: 10/09/2001

TIME: 09:35:50

Input Set : A:\USSEQLIST.TXT

Output Set: N:\CRF3\10092001\I925778.raw

ENTERED

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4 <110> APPLICANT: JAWORSKI, DEBORAH DEE
5     PAYNE, DAVID J.
6     SLATER-RADOSTI, COURTNEY E.
7     YAN, KANG
9 <120> TITLE OF INVENTION: METHODS OF MODULATING ACTIVITY OF DXR
12 <130> FILE REFERENCE: GM50074
C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/925,778
15 <141> CURRENT FILING DATE: 2001-08-09
17 <150> PRIOR APPLICATION NUMBER: 60/223,909
18 <151> PRIOR FILING DATE: 2000-08-09
20 <160> NUMBER OF SEQ ID NOS: 6
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 1191
26 <212> TYPE: DNA
27 <213> ORGANISM: Haemophilus influenzae
29 <400> SEQUENCE: 1
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31 tctgttatcg aaaataaccc tcagaaatat catgcatttg cactcgtagg cggaaaaaat 120
32 gtagaagcaa tgtttgaaca atgtatcaaa ttccgaccgc actttgcggc tcttgatgat 180
33 gtaaattgagg ctaaaatttt acgtgaaaaa ttaattgccc atcatattcc aacggaagta 240
34 ttagcaggac gacgagctat ttgcgaactc gcagcacacc cagatgccga tcagataatg 300
35 gcgtcgattg ttggtgcagc aggattgtta ccgactcttt cagcgggtta agcaggtaaa 360
36 cgggtattac tggcaataaa agaactcactg gtaacctgcg gacagctttt tattgatgcc 420
37 gtaaaaaact atggctcgaa gcttttacca gtagatagtg aacataatgc tatctttcaa 480
38 tcattaccgc cagaagcaca agaaaaaatc gggttttgcc cactttctga attaggtgta 540
39 agtaaaatta tactcactgg ttctggcgga ccattccgtt acacgccact tgaacaattc 600
40 accaacataa caccagaaca agcggttgca caccctaatt ggtctatggg taaaaaatt 660
41 tctgtcgatt cagctacaat gatgaataag ggcttggaat acattgaggc tcgctggctt 720
42 ttcaatgcaa gtgcggaaga aatggaagtt attattcatc cacaatcaat tattcattct 780
43 atggtacggg atgttgacgg ctacgtcatt actcaaatgg gaaatccaga tatgcgtaca 840
44 ccaattgcag aaactatggc atatcctcac cgcacttttg ctggagtaga accactcgat 900
45 ttcttttaaaa tcaagaact gacatttatt gaacctgatt ttaatcgcta tccaaattta 960
46 aaactggcta ttgatgcctt tgctgcgggt caatatgcca caacagcaat gaatgcagct 1020
47 aatgaaattg ccgtacaagc atttttagat cgtcaaattg gctttatgga tattgcaaaa 1080
48 attaatcga aaacaattga gagaatttcg ccttatacca ttcaaaatat tgatgatgta 1140
49 ctgaaattg atgcacaagc aagagagatt gcgaaaacac tacttagaga a 1191
51 <210> SEQ ID NO: 2
52 <211> LENGTH: 1588
53 <212> TYPE: PRT
54 <213> ORGANISM: Haemophilus influenzae
56 <400> SEQUENCE: 2
57 Met Gln Lys Gln Asn Ile Val Ile Leu Gly Ser Thr Gly Ser Ile Gly
58 1 5 10 15
59 Lys Ser Thr Leu Ser Val Ile Glu Asn Asn Pro Gln Lys Tyr His Ala
60 20 25 30
61 Phe Ala Leu Val Gly Gly Lys Asn Val Glu Ala Met Phe Glu Gln Cys

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62          35          40          45
63 Ile Lys Phe Arg Pro His Phe Ala Ala Leu Asp Asp Val Asn Ala Ala
64          50          55          60
65 Lys Ile Leu Arg Glu Lys Leu Ile Ala His His Ile Pro Thr Glu Val
66 65          70          75          80
67 Leu Ala Gly Arg Arg Ala Ile Cys Glu Leu Ala Ala His Pro Asp Ala
68          85          90          95
69 Asp Gln Ile Met Ala Ser Ile Val Gly Ala Ala Gly Leu Leu Pro Thr
70          100          105          110
71 Leu Ser Ala Val Lys Ala Gly Lys Arg Val Leu Leu Ala Asn Lys Glu
72          115          120          125
73 Ser Leu Val Thr Cys Gly Gln Leu Phe Ile Asp Ala Val Lys Asn Tyr
74          130          135          140
75 Gly Ser Lys Leu Leu Pro Val Asp Ser Glu His Asn Ala Ile Phe Gln
76 145          150          155          160
77 Ser Leu Pro Pro Glu Ala Gln Glu Lys Ile Gly Phe Cys Pro Leu Ser
78          165          170          175
79 Glu Leu Gly Val Ser Lys Ile Ile Leu Thr Gly Ser Gly Gly Pro Phe
80          180          185          190
81 Arg Tyr Thr Pro Leu Glu Gln Phe Thr Asn Ile Thr Pro Glu Gln Ala
82          195          200          205
83 Val Ala His Pro Asn Trp Ser Met Gly Lys Lys Ile Ser Val Asp Ser
84          210          215          220
85 Ala Thr Met Met Asn Lys Gly Leu Glu Tyr Ile Glu Ala Arg Trp Leu
86 225          230          235          240
87 Ala Thr Gly Cys Ala Ala Ala Ala Cys Ala Ala Ala Cys Ala
88          245          250          255
89 Thr Thr Gly Thr Cys Ala Thr Thr Cys Thr Thr Gly Gly Thr Thr Cys
90          260          265          270
91 Ala Ala Cys Gly Gly Gly Ala Thr Cys Ala Ala Thr Cys Gly Gly Thr
92          275          280          285
93 Ala Ala Gly Ala Gly Thr Ala Cys Cys Cys Thr Thr Thr Cys Thr Gly
94          290          295          300
95 Thr Thr Ala Thr Cys Gly Ala Ala Ala Ala Thr Ala Ala Cys Cys Cys
96 305          310          315          320
97 Thr Cys Ala Gly Ala Ala Thr Ala Thr Cys Ala Thr Gly Cys Ala
98          325          330          335
99 Thr Thr Thr Gly Cys Ala Cys Thr Cys Gly Thr Ala Gly Gly Cys Gly
100          340          345          350
101 Gly Ala Ala Ala Ala Ala Thr Gly Thr Ala Gly Ala Ala Gly Cys
102          355          360          365
103 Ala Ala Thr Gly Thr Thr Thr Gly Ala Ala Cys Ala Ala Thr Gly Thr
104          370          375          380
105 Ala Thr Cys Ala Ala Ala Thr Thr Cys Cys Gly Ala Cys Cys Gly Cys
106 385          390          395          400
107 Ala Cys Thr Thr Thr Gly Cys Gly Gly Cys Thr Cys Thr Thr Gly Ala
108          405          410          415
109 Thr Gly Ala Thr Gly Thr Ala Ala Ala Thr Gly Cys Gly Gly Cys Thr
110          420          425          430

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111 Ala Ala Ala Ala Thr Thr Thr Thr Ala Cys Gly Thr Gly Ala Ala Ala
112          435                      440                      445
113 Ala Ala Thr Thr Ala Ala Thr Thr Gly Cys Gly Cys Ala Thr Cys Ala
114      450                      455                      460
115 Thr Ala Thr Thr Cys Cys Ala Ala Cys Gly Gly Ala Ala Gly Thr Ala
116 465                      470                      475                      480
117 Thr Thr Ala Gly Cys Ala Gly Gly Ala Cys Gly Ala Cys Gly Ala Gly
118                      485                      490                      495
119 Cys Thr Ala Thr Thr Thr Gly Cys Gly Ala Ala Cys Thr Cys Gly Cys
120                      500                      505                      510
121 Ala Gly Cys Ala Cys Ala Cys Cys Cys Ala Gly Ala Thr Gly Cys Cys
122                      515                      520                      525
123 Gly Ala Thr Cys Ala Gly Ala Thr Ala Ala Thr Gly Gly Cys Gly Thr
124      530                      535                      540
125 Cys Gly Ala Thr Thr Gly Thr Thr Gly Gly Thr Gly Cys Ala Gly Cys
126 545                      550                      555                      560
127 Ala Gly Gly Ala Thr Thr Gly Thr Thr Ala Cys Cys Gly Ala Cys Thr
128                      565                      570                      575
129 Cys Thr Thr Thr Cys Ala Gly Cys Gly Gly Thr Thr Ala Ala Ala Gly
130                      580                      585                      590
131 Cys Ala Gly Gly Thr Ala Ala Ala Cys Gly Gly Gly Thr Ala Thr Thr
132                      595                      600                      605
133 Ala Cys Thr Gly Gly Cys Ala Ala Ala Thr Ala Ala Ala Gly Ala Ala
134      610                      615                      620
135 Thr Cys Ala Cys Thr Gly Gly Thr Ala Ala Cys Cys Thr Gly Cys Gly
136 625                      630                      635                      640
137 Gly Ala Cys Ala Gly Cys Thr Thr Thr Thr Thr Ala Thr Thr Gly Ala
138                      645                      650                      655
139 Thr Gly Cys Cys Gly Thr Ala Ala Ala Ala Ala Ala Cys Thr Ala Thr
140                      660                      665                      670
141 Gly Gly Cys Thr Cys Gly Ala Ala Gly Cys Thr Thr Thr Thr Ala Cys
142                      675                      680                      685
143 Cys Ala Gly Thr Ala Gly Ala Thr Ala Gly Thr Gly Ala Ala Cys Ala
144      690                      695                      700
145 Thr Ala Ala Thr Gly Cys Thr Ala Thr Cys Thr Thr Thr Cys Ala Ala
146 705                      710                      715                      720
147 Thr Cys Ala Thr Thr Ala Cys Cys Gly Cys Cys Ala Gly Ala Ala Gly
148                      725                      730                      735
149 Cys Ala Cys Ala Ala Gly Ala Ala Ala Ala Ala Ala Thr Cys Gly Gly
150                      740                      745                      750
151 Thr Thr Thr Thr Thr Gly Cys Cys Cys Ala Cys Thr Thr Thr Cys Thr
152                      755                      760                      765
153 Gly Ala Ala Thr Thr Ala Gly Gly Thr Gly Thr Ala Ala Gly Thr Ala
154      770                      775                      780
155 Ala Ala Ala Thr Thr Ala Thr Ala Cys Thr Cys Ala Cys Thr Gly Gly
156 785                      790                      795                      800
157 Thr Thr Cys Thr Gly Gly Cys Gly Gly Ala Cys Cys Ala Thr Thr Cys
158                      805                      810                      815
159 Cys Gly Thr Thr Ala Cys Ala Cys Gly Cys Cys Ala Cys Thr Thr Gly

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160          820          825          830
161 Ala Ala Cys Ala Ala Thr Thr Cys Ala Cys Cys Ala Ala Cys Ala Thr
162          835          840          845
163 Ala Ala Cys Ala Cys Cys Ala Gly Ala Ala Cys Ala Ala Gly Cys Gly
164          850          855          860
165 Gly Thr Thr Gly Cys Ala Cys Ala Cys Cys Cys Thr Ala Ala Thr Thr
166 865          870          875          880
167 Gly Gly Thr Cys Thr Ala Thr Gly Gly Gly Thr Ala Ala Ala Ala Ala
168          885          890          895
169 Ala Ala Thr Thr Thr Cys Thr Gly Thr Cys Gly Ala Thr Thr Cys Ala
170          900          905          910
171 Gly Cys Thr Ala Cys Ala Ala Thr Gly Ala Thr Gly Ala Ala Thr Ala
172          915          920          925
173 Ala Gly Gly Gly Cys Thr Thr Gly Gly Ala Ala Thr Ala Cys Ala Thr
174          930          935          940
175 Thr Gly Ala Gly Gly Cys Thr Cys Gly Cys Thr Gly Gly Cys Thr Thr
176 945          950          955          960
177 Thr Thr Cys Ala Ala Thr Gly Cys Ala Ala Gly Thr Gly Cys Gly Gly
178          965          970          975
179 Ala Ala Gly Ala Ala Ala Thr Gly Gly Ala Ala Gly Thr Thr Ala Thr
180          980          985          990
181 Thr Ala Thr Thr Cys Ala Thr Cys Cys Ala Cys Ala Ala Thr Cys Ala
182          995          1000          1005
183 Ala Thr Thr Ala Thr Thr Cys Ala Thr Thr Cys Thr Ala Thr Gly Gly
184          1010          1015          1020
185 Thr Ala Cys Gly Gly Thr Ala Thr Gly Thr Thr Gly Ala Cys Gly Gly
186 1025          1030          1035          1040
187 Cys Thr Cys Ala Gly Thr Cys Ala Thr Thr Ala Cys Thr Cys Ala Ala
188          1045          1050          1055
189 Ala Thr Gly Gly Gly Ala Ala Ala Thr Cys Cys Ala Gly Ala Thr Ala
190          1060          1065          1070
191 Thr Gly Cys Gly Thr Ala Cys Ala Cys Cys Ala Ala Thr Thr Gly Cys
192          1075          1080          1085
193 Ala Gly Ala Ala Ala Cys Thr Ala Thr Gly Gly Cys Ala Thr Ala Thr
194          1090          1095          1100
195 Cys Cys Thr Cys Ala Cys Cys Gly Cys Ala Cys Thr Thr Thr Thr Gly
196 1105          1110          1115          1120
197 Cys Thr Gly Gly Ala Gly Thr Ala Gly Ala Ala Cys Cys Ala Cys Thr
198          1125          1130          1135
199 Cys Gly Ala Thr Thr Thr Cys Thr Thr Thr Ala Ala Ala Ala Thr Cys
200          1140          1145          1150
201 Ala Ala Ala Gly Ala Ala Cys Thr Gly Ala Cys Ala Thr Thr Thr Ala
202          1155          1160          1165
203 Thr Thr Gly Ala Ala Cys Cys Thr Gly Ala Thr Thr Thr Thr Ala Ala
204          1170          1175          1180
205 Thr Cys Gly Cys Thr Ala Thr Cys Cys Ala Ala Ala Thr Thr Thr Ala
206 1185          1190          1195          1200
207 Ala Ala Ala Cys Thr Gly Gly Cys Thr Ala Thr Thr Gly Ala Thr Gly
208          1205          1210          1215

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209 Cys Cys Thr Thr Thr Gly Cys Thr Gly Cys Gly Gly Gly Thr Cys Ala
210      1220      1225      1230
211 Ala Thr Ala Thr Gly Cys Gly Ala Cys Ala Ala Cys Ala Gly Cys Ala
212      1235      1240      1245
213 Ala Thr Gly Ala Ala Thr Gly Cys Ala Gly Cys Thr Ala Ala Thr Gly
214      1250      1255      1260
215 Ala Ala Ala Thr Thr Gly Cys Cys Gly Thr Ala Cys Ala Ala Gly Cys
216 1265      1270      1275      1280
217 Ala Thr Thr Thr Thr Thr Ala Gly Ala Thr Cys Gly Thr Cys Ala Ala
218      1285      1290      1295
219 Ala Thr Thr Gly Gly Cys Thr Thr Thr Ala Thr Gly Gly Ala Thr Ala
220      1300      1305      1310
221 Thr Thr Gly Cys Ala Ala Ala Ala Ala Thr Thr Ala Ala Thr Thr Cys
222      1315      1320      1325
223 Gly Ala Ala Ala Ala Cys Ala Ala Thr Thr Gly Ala Gly Ala Gly Ala
224      1330      1335      1340
225 Ala Thr Thr Thr Cys Gly Cys Cys Thr Thr Ala Thr Ala Cys Cys Ala
226 1345      1350      1355      1360
227 Thr Thr Cys Ala Ala Ala Ala Thr Ala Thr Thr Gly Ala Thr Gly Ala
228      1365      1370      1375
229 Thr Gly Thr Ala Cys Thr Cys Gly Ala Ala Ala Thr Thr Gly Ala Thr
230      1380      1385      1390
231 Gly Cys Ala Cys Ala Ala Gly Cys Ala Ala Gly Ala Gly Ala Gly Ala
232      1395      1400      1405
233 Thr Thr Gly Cys Gly Ala Ala Ala Ala Cys Ala Cys Thr Ala Cys Thr
234      1410      1415      1420
235 Thr Ala Gly Ala Gly Ala Ala Phe Asn Ala Ser Ala Glu Glu Met Glu
236 1425      1430      1435      1440
237 Val Ile Ile His Pro Gln Ser Ile Ile His Ser Met Val Arg Tyr Val
238      1445      1450      1455
239 Asp Gly Ser Val Ile Thr Gln Met Gly Asn Pro Asp Met Arg Thr Pro
240      1460      1465      1470
241 Ile Ala Glu Thr Met Ala Tyr Pro His Arg Thr Phe Ala Gly Val Glu
242      1475      1480      1485
243 Pro Leu Asp Phe Phe Lys Ile Lys Glu Leu Thr Phe Ile Glu Pro Asp
244      1490      1495      1500
245 Phe Asn Arg Tyr Pro Asn Leu Lys Leu Ala Ile Asp Ala Phe Ala Ala
246 1505      1510      1515      1520
247 Gly Gln Tyr Ala Thr Thr Ala Met Asn Ala Ala Asn Glu Ile Ala Val
248      1525      1530      1535
249 Gln Ala Phe Leu Asp Arg Gln Ile Gly Phe Met Asp Ile Ala Lys Ile
250      1540      1545      1550
251 Asn Ser Lys Thr Ile Glu Arg Ile Ser Pro Tyr Thr Ile Gln Asn Ile
252      1555      1560      1565
253 Asp Asp Val Leu Glu Ile Asp Ala Gln Ala Arg Glu Ile Ala Lys Thr
254      1570      1575      1580
255 Leu Leu Arg Glu
256 1585
259 <210> SEQ ID NO: 3

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/925,778

DATE: 10/09/2001

TIME: 09:35:51

Input Set : A:\USSEQLIST.TXT

Output Set: N:\CRF3\10092001\I925778.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number